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cont*

disclosed embodiments but, on the contrary, is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the appended claims.--

IN THE CLAIMS:

5 **Delete claims 1-9 on substitute pages 12-14, without
prejudice or disclaimer and insert new claims 10-18 as follows:**

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10 A method for statistical multiplexing of ATM connections comprising:
conducting a plurality of ATM connections over a common connecting line, the plurality of ATM connections having an effective bandwidth reserved for conduction of the aggregate of the plurality of ATM connections on the connecting line and utilizing an acceptance algorithm that allocates potential added connections to one of a first class and a second class; and

15 deciding whether an additional potential added connection can be accepted by the common connecting line based on acceptance criteria and a prescribed effective bandwidth, the deciding step comprising the steps of:
identifying the prescribed effective bandwidth on a step-by-step basis with at least one of a setup and a release of connection, wherein the identification starts from an initial value and the acceptance algorithm is performed at every step;

20 determining whether at least one of the additional potential added connection or a released connection may be accepted by at least one of the first class and the second class;

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defining a first bandwidth representative of the first class and a second bandwidth representative of the second class;

modifying at least one of the first and second bandwidths by at least one of a first traffic parameter value and a second traffic parameter value based on the acceptance of the additional potential added connection to at least one of the first class and the second class; and

5 at least one of accepting and rejecting the additional potential added connection based on at least the identified prescribed effective bandwidth and the acceptance criteria.

10 11. The method according to 10, wherein the first traffic parameter value is a sustainable cell rate and the second traffic parameter value is a peak cell rate of the corresponding connection.

15 12. The method according to claim 10, wherein at least one of the acceptance criteria is established such that, in the case of the connection setup, when the additional potential added connection can be accepted to the first class, a calculation is performed to determine whether the first bandwidth identified is adequate including this connection, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections and the first bandwidth is incremented by the first traffic parameter value when the at least one of the acceptance criteria is met and the first bandwidth is incremented by the second traffic parameter value when the at least one of the acceptance criteria is not met.

20 25 13. The method according to claim 12, wherein when the additional potential added connection cannot be allocated to the first class, it is automatically allocated to the second class and the second bandwidth is

incremented by the second traffic parameter value.

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14. The method according to claim 10, wherein at least one of the acceptance criteria is established such that, in the case of the connection release when the released connection can be accepted by the first class, a calculation is performed to determine whether the first bandwidth, exclusive of this connection, is adequate for the remaining connections, wherein the first bandwidth is not allowed to exceed the sum of the peak cell rates of all connections and the first bandwidth is diminished by the second traffic parameter value when the at least one of the acceptance criteria is met and the first bandwidth is diminished by the first traffic parameter value when the at least one of the acceptance criteria is not met.

15. The method according to claim 14, wherein when the connection to be released cannot be allocated to the first class, it is automatically allocated to the second class and the second bandwidth is diminished by the second traffic parameter value.

16. The method according to claim 11, wherein at least one of the acceptance criteria is established such that when the connection to be released is allocated to the first class, a calculation is performed to determine whether the first bandwidth without this released connection is adequate for the remaining connections; and wherein the first bandwidth is diminished by the second traffic parameter value when the at least one acceptance criterion is met and the value of the identified first bandwidth is upwardly limited by the sum of the peak cell rates of the first class.